

REMARKS

Claims 70, 71 and 75 previously presented in response to the Office Action dated January 10, 2006, were not considered for examination pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species and not within the elected species 4 of Figure 7 as selected on 03/03/2005. Claims 70, 71 and 75 are now withdrawn.

Claims 53-55, 60-63 and 72-74 are pending in the application. Claims 53 and 60 have been amended. No claims have been added. No new matter has been added. Applicant respectfully requests reconsideration of the present application and consideration of the following remarks and the claims.

Response to Amendment

The Office Action dated June 23, 2006 stated that Applicant's declaration as filed on 04/13/06 under 37 CFR 1.131 is ineffective to overcome the Davis et al. reference. Applicant respectfully disagrees with the Office Action's assessment and respectfully requests reconsideration of the affidavit.

The Inventor's declaration states that he "conceived of the claimed invention prior to February 15th, 2002 and implemented a software embodiment of the claimed invention, with a help an engineer, prior to February 15th, 2002" and that "The software included a routing module, for example, as illustrated in FIG. 10 of the present invention." The software was implemented, which means it was created, and the inventor also stated that it included a module which implemented the invention. Therefore, Applicant respectfully submits that the statement and FIG. 10 constitute a physical and tangible form that are sufficient to establish and demonstrate a reduction to practice. In other words, Applicant's previously submitted evidence demonstrates a reduction to practice before the prior art date of the reference.

Applicant respectfully submits that once the Inventor has demonstrated the reduction to practice as indicated by the Inventor in the declaration, any rejections based on insufficient

evidence to establish conception and diligence are inappropriate. As such, Applicant respectfully requests reconsideration of the declaration.

Claims 53-55, 60-62 and 72-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crafts (US 5,288,949) over Davis et al. (US 2003/0155642).

Davis teaches a “mesh-like reinforcing structure to inhibit delamination and cracking in a multilayer semiconductor device” (Abstract). The object of Davis’ disclosure is concerned with the structural fabrication of a semiconductor device. Davis discloses a reinforcing structure that provides both “vertical and horizontal reinforcement and may be fabricated on the periphery of the active device region or within open regions of the device that are susceptible to delamination and cracking.” (Abstract). Davis is silent on creating a shielding mesh where at least one signal line is routed through the shielding mesh. Davis also fails to teach or suggest a structure with an intention to remove both capacitive and inductive signal coupling effects of routing in integrated circuit devices.

Crafts teaches a “Multi-Chip Module” with the conductors interwoven in a 3-dimensional to provide shielding for signal conductors to reduce cross-talk. However, Crafts fail to teach or suggest the use of two or more vias to connect conductors or signal lines of two adjacent layers.

Independent Claim 53

Amended independent claim 53 contains the limitation “...utilizing close proximity of the at least two vias in conjunction with said shielding mesh to reduce noise and coupling effect.” (Emphasis added).

Independent Claim 60

Amended independent claim 60 contains the limitation “...utilizing close proximity of the two vias in conjunction with said shielding mesh to reduce noise and coupling effect.”

(Emphasis added).

Applicant’s amended independent claim 53 includes the limitation of “...utilizing close proximity of the at least two vias in conjunction with said shielding mesh to reduce noise and coupling effect.” and the amended independent claim 60 includes the limitation of “...utilizing close proximity of the two vias in conjunction with said shielding mesh to reduce noise and coupling effect.” As clearly stated in at least pages 15-16 of the Application, “... vias of varying sizes can be utilized in as close proximity as possible without dependency of grid size. Utilizing the close proximity of the vias, relative segment lengths of each signal, VDD or VSS shielding mesh is reduced.” (page 15, Application) and “... due to their relative small segment lengths, the shielding mesh in function, reduces the effective RC component of the lines being connected to. This in turn reduces the noise and coupling effect and therefore, the shielding mesh can be deployed on any substrate area where routing resources are used.” (page 15, Application). Therefore, the two or more vias in conjunction with the shielding mesh are used with the purpose to reduce improve the performance of the shielding mesh by reducing the noise and coupling effect. The object is clearly not for structural reinforcement of the integrated circuit as stated in Davis or in pages 4 and 5 of the Final Office Action dated June 23, 2006.

Applicant submits that Davis, Crafts, and the combination of Davis and Crafts fails to teach or suggest each and every single element of the claim. As such, the amended independent claims 53 and 60 are patentable over Crafts in view of Davis and Applicant respectfully requests withdrawal of the rejection of the claims.

Dependent Claims 54, 55, 61-63 and 72-74

Claims 54, 55, 61-63 and 72-74 either directly or indirectly depend from amended independent claims 53 and 60. For at least this reasons, Applicant respectfully submits that they are patentable over Crafts in view of Davis.

CONCLUSION


For the reasons listed, Applicant respectfully submits that the specification and claims are in proper form, and the claims are patentably defined over the prior art. Therefore Applicant respectfully submits that all rejections have been overcome and that all pending claims are in condition for allowance. If a telephone conference would facilitate the prosecution of this application, the Examiner is invited to contact the James Scheller at (408) 720-8300.

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due or credit any overages. If an extension is required, Applicants hereby request such extension.

Respectfully Submitted,

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